

treatment of 16,035 patients in 2009 (7,150,000 CHF; new service) with 2007 (7,184,000 CHF; old service, adjusted to 16,035 patients) showed slightly reduced costs (-34,000 CHF; 95%-CI: +60,000 to -127,000). **CONCLUSIONS:** The cost reduction of 0.5% is a conservative estimate as wages have increased since 2007. The reorganisation has the potential to be a dominant intervention: While quality of service provision improved, treatment costs slightly decreased against the secular trend of increase. Data has to be confirmed in follow-up measurements for decision makers.

PHP65

PHARMACEUTICAL EXPENDITURE IN PORTUGAL – POLICIES AND IMPACT

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OBJECTIVES: The Stability and Growth Pact approved by the Portuguese Government in 2010 limits the expenditure growth in 1% for reimbursed pharmaceuticals in outpatient sector. The Memorandum of Understanding signed in May 2011 between the Government and the International Authorities subsequently has increased the requirements to reduce public expenditure. Considering the pricing and reimbursement changes, this study aims to: 1) analyze public expenditure trends on medicines, and 2) identify the main factors and impacts. **METHODS:** We have analyzed the database sales and prescription data from Portuguese community pharmacies, and performed simulations to measure the impact of policy measures. The statistical analysis of monthly data by product was performed with SAS. **RESULTS:** The NHS expenditure in outpatient medicines has increased 5.6% in 2010. The legislation approved in June 2009, that established generics reimbursement at 100% for some pensioners (withdrawn in June 2010), was responsible for more 26.8 million euros of NHS spending in 2010. Nevertheless 117.1 million euros were explained by new molecules reimbursed in the last three years. After July 2010 and due to the 1% VAT increase, the expenditure had increased 7.5 million euros. The Health Subsystems (special security schemes for certain professions) had also contributed positively: in December about 7.4 million euros were transferred from the 'ADSE' (civil servants subsystem) for NHS. At the end of 2010, the Government adopted further measures to control public expenditure, such as 6% prices deduction and several reductions in pharmaceuticals reimbursement levels. Immediately the NHS medicines expenditure decreased 21.2% in the four first months of 2011. In opposition the hospital market is growing 3.5%. **CONCLUSIONS:** Besides price and reimbursement administrative reductions, with limited impact in the short run, it would be important to consider measures, that should be assessed on a periodic basis to identify the best strategies to promote rationality and efficiency in the outpatient and hospital sector.

PHP66

IMPACT OF TYPE OF DRUG INSURANCE ON THE USE OF HEALTH CARE SERVICES AMONG USERS OF ANTIDEPRESSANTS

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OBJECTIVES: To compare the use of health care services between patients with private and public drug insurance among users of anti-depressants. **METHODS:** A matched retrospective cohort study was conducted using databases for Quebec residents with private (reMed database) or public (RAMQ database) drug insurance. The study included 194 reMed and 1923 RAMQ patients aged 18 to 64 years who filled at least one prescription of an antidepressant between December 2007 and September 2009. Patients were matched on age, sex and date of 1st filled prescription of an antidepressant. The primary outcomes were the number of outpatients medical visits, emergency department (ED) visit (yes/no) and hospitalization (yes/no) for all causes over one year. The secondary outcome was the average antidepressant cost per patient per month. Linear or logistic regression was used to compare the outcomes between patients with private and public drug insurance, while adjusting for potential confounders. **RESULTS:** Patients with private drug insurance (21.3% males) had 8.1 outpatient medical visits on average, 17.5% had an ED visit and 8.8% were hospitalized over one year. Corresponding figures were 6.6, 20.0% and 8.5% for patients with public drug insurance (23.6% males). Patients with private drug insurance were found to have more outpatient medical visits than patients with public drug insurance (adjusted mean difference = 1.2; 95%CI: 0.2 to 2.3), but were not more likely to have an ED visit (adjusted OR = 0.7; 95% CI: 0.5 to 1.1) or a hospitalization (OR = 0.9; 95%CI: 0.5-1.6). Average cost per patient per month for antidepressants was \$48.50 (95%CI: 44.97-52.02) and \$33.73 (95%CI: 32.94-34.51) for patients with private and public drug insurance, respectively. **CONCLUSIONS:** Little differences were found in the use of health care services between users of antidepressants with private and public drug insurance, while important differences were observed for the cost of antidepressants.

PHP67

TENDERING FOR OUTPATIENT PRESCRIPTION PHARMACEUTICALS: WHAT CAN BE LEARNED FROM CURRENT PRACTICES IN EUROPE?

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OBJECTIVES: To explore the current status (2010) of tendering programs for outpatient pharmaceuticals in the European countries and how these programs operate. **METHODS:** A survey was designed to assess the features of tendering programs in European countries. All 27 countries of the European Union plus Norway were included in the study. The survey was sent to national representatives of authori-

ties and organizations and to academic researchers with expertise in the domain.

RESULTS: Nineteen of the 28 countries have responded to the questionnaire (68%). Seven countries have adopted tendering programs for pharmaceuticals in ambulatory care. Tendering was more popular in countries with a mature generic medicines market (54%) than in countries with a developing generic medicines market (12.5%). Authorities with financial interest for possible savings issued the tenders and the lowest price/best offer was amongst the criteria to award the tender in most cases. The frequency varied from only once to once every two weeks and the number of winners was between one and four. The objectives of achieving cost savings were achieved in the short term but results on long term are still unclear.

CONCLUSIONS: Tendering programs can achieve savings in the short term, but the effects in the long term are still unclear. It can be concluded that the policy can work, but the features of the programs such as the legal framework, the criteria to grant the tender, the number of winners, the reward of the winner and the frequency, have to be well-thought-out.

PHP68

ASSESSMENT OF THE NHS HOSPITALS' PRODUCTIVITY IN THE REGIONAL HEALTH AUTHORITY OF THESSALY IN GREECE

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OBJECTIVES: To assess the performance in seven homogenous specialty clinics across all NHS hospitals in the Regional Health Authority of Thessaly (RHAT), over the period 2002-2006. **METHODS:** Data Envelopment Analysis by using the Malmquist Productivity Index and its decompositions have been applied in order to measure the technical efficiency and productivity. Clinics were considered to transform inputs labour (medical and nursing staff) and capital (hospital beds) into health services, approximated by the number of in-patient discharges and in-patient days, used as outputs. The model is output oriented and assumes variable return to scale. Data were collected from hospitals' records. **RESULTS:** Overall productivity progressed in all clinics, led by technical change rather than technical efficiency. Over the whole period the size of the clinics influences the overall effects on hospital performance and the maximum level of outputs produced has not been achieved using the given labour and capital inputs, except orthopaedic clinics. The highest productivity changes were achieved by the gynecology (22.5%), the urology (15.7%) and the paediatric clinics (15.4%). All clinics experienced high technological change level, except general medicine clinics which drops by 6.5%. The highest technological changes were experienced by gynecology clinics (48.4%), the paediatrics (26.2%) and ophthalmology (22.1%). **CONCLUSIONS:** Homogeneity in assessing hospitals' performance provides evidence on the efficiency and productivity gains among clinics and suggests improvements in those which appear inefficient. The difficult economic situation Greece is facing nowadays makes the assessment of NHS hospitals' performance a priority in the decision making.

PHP69

CAN WE INCREASE HOSPITAL REVENUE WITH DIFFERENT NEUROMUSCULAR BLOCKERS? AN ANALYSIS OF SAVING COST FOR HOSPITAL BUDGET WITH TIME SAVING EFFECT OF DIFFERENT NEUROMUSCULAR BLOCKERS IN SHORT OPERATIONS

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OBJECTIVES: Muscle relaxants are used in anesthesia to obtain adequate muscle relaxation. Our aim is obtaining improvement in hospital budget by selecting adequate neuromuscular blocking agents for short-term (under 60 minutes) pediatric operations for hospital managements. **METHODS:** There is a basic investigation of the duration to recovery time of atracurium and rocuronium administrations during anesthesia induction in ASA I-II children. In order to evaluate the effect on hospital budget, direct expenses were used. **RESULTS:** The mean time to reach TOF75 in recovery with rocuronium and atracurium were calculated 38 and 51 minutes, respectively. In atracurium group, time to reach TOF75 was 51 minutes, but operation time was 46 minutes (as rocuronium groups) and patients needed an additional 5 minutes for recovery. During additional minutes, patients were kept in the operation room (OR), thus preparation for the next patient was delayed. After extubation of patients, to determine the period of preparation of an OR for the next patient, a questionnaire was administered. This preparation was determined to be 14 minutes. These means, in the rocuronium and atracurium groups one needs 60 minutes (46+14) and 65 minutes (51+14), respectively from the start of an operation to the start of next operation. In a pediatric surgery department, lower abdominal and urogenital surgery unit income with rocuronium or atracurium are the same but, rocuronium brings extra time for an average of 15 operations lasting shorter than 1 hour. **CONCLUSIONS:** Study showed that if a hospital works with 100% performance and has no other problems (shortage of bed, personnel, etc), such a hospital may perform, in a month, an extra 15 pediatric surgical operations less than 1 hour can, by using rocuronium. Thus rocuronium may lead an additional income of US\$ 2436 per month for one OR. In other words, in short operations, using rocuronium rather than atracurium may lead to savings which is 30-35% of total cost.

PHP70

VALUE BASED PRICING (VBP): IS THIS THE WAY FORWARD FOR THE UK NHS?

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